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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,711	10/22/2003	Seiji Kagawa	160-394	4646

23117 7590 04/19/2007  
NIXON & VANDERHYE, PC  
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ARLINGTON, VA 22203

EXAMINER
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MAYEKAR, KISHOR

ART UNIT	PAPER NUMBER
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1753

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/689,711

Applicant(s)

KAGAWA, SEIJI

Examiner

Kishor Mayekar

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1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/962,338.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/03.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claim 1 and 3 are objected to because of the following informalities:
  - o in claim 1, a semicolon is needed between the first and second steps"; and
  - o in claim 3, the recitation "a plurality of solid-liquid mixed fluid" with the term fluid in singular.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the recitation "introducing said dispersion medium ... having an inlet/outlet with a high pressure" is confusing as which subject matter is with a high pressure and the meaning of an inlet/outlet (the meaning of an inlet and an outlet or the meaning of an inlet or an outlet). The recitation "exciting dispersion medium" is confusing

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because it is not a step of the method and without any correlation to the dispersion medium. Should it be "to excite each of said dispersion medium"? The same is applied to the confusing recitation "direct current voltage to each excited dispersion medium". Should it be "direct current voltage to each of said excited dispersion medium in both chambers"? The recitation "the downstream side" and " the application position" are lacking antecedent. The recitation "and electrifying each dispersion medium" is confusing because it is not a step of the method and without any correlation to the dispersion medium. Should it be "to electrify each of said excited dispersion medium"? The last step "aggregating and bonding" is confusing because it is not an active step as with other earlier steps. The same with the meaning of "inlet/outlet" is applied to the recitation "crossing/crashing".

In claim 3, the recitation "in a liquid medium" is confusing because it recites a liquid medium without any correlation to the identical recitation in claim 1. The recitation "speed, crossing/crashing each other, subsequently, injecting ..." is either incomplete or confusing. The recitation "already processed" is either lacking antecedent basis or confusing. The same is applied to claim 1 to the recitation "cross/crashing".

In claim 4, the same is applied to claim 1 to the recitation "cross/crashing".

In claim 5, the recitation "said solid-liquid mixture" is confusing as to which of said fluid.

In claim 6, the Markush group is improperly recited because it is not in the format "selected from the group consisting of ...". The same is applied to claim 1 to the recitations "inlet/outlet", "exciting said first and second", "direct current voltage to said first and second", "the downstream ... the application position", "and electrifying each dispersion medium", the last step of "aggregating ...", and "crossing/crashing".

In claim 8, the same is applying to claim 6 to the improper Markush group.

In claim 9, the same is applying to claim 6 to the improper Markush group (two appearances). The recitation "said particle" is confusing as which particle.

In claim 10, the same is applied to claim 1 to the recitation "cross/crashing".

#### ***Allowable Subject Matter***

4. Claims 1-11 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

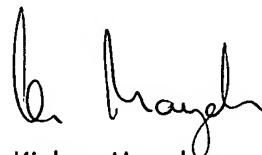
5. The following is a statement of reasons for the indication of allowable subject matter: Because the prior art references do not disclose, in a method of manufacturing a liquid medium containing composite ultrafine particles, the recited steps of applying a high frequency voltage, applying a direct current voltage, and injecting ... to electrostatically agglomerate ... and aggregating and bonding through excitation transfer in combination with other recited steps as claimed in claims 1-5 and 6-11.

*Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kishor Mayekar  
Primary Examiner  
Art Unit 1753